

# EXHIBIT B11



## Contract Work Authorization (CWA) Change Order

This is Change Order ("CO") No. 2 to Contract Work Authorization No. C1372 dated August 24, 2017 issued under and pursuant to the Blanket Agreement or Master Service Agreement No. C595 formerly 4400006370 dated February 8, 2012 (the "MSA") between the below-named Contractor ("Contractor"), a Massachusetts company, and Pacific Gas and Electric Company ("PG&E"), a California corporation with its headquarters located at 77 Beale Street, San Francisco, California 94105. Contractor shall perform all Work under this CWA, as amended by this Change Order, pursuant to and in accordance with the terms and conditions of the MSA.

Contractor's Legal Name:	GEI Consultants, Inc.	This Change Order consists of 5 pages.
Contractor's Address:	180 Grand Ave, Suite 1410 Oakland, CA 94612	
Project Name:	Dam Failure Analysis and Inundation Map Updates	
Job Location:	Contractor's facilities	

**CHANGES:** The Parties hereby modify the Contract Work Authorization referenced above as follows:

1. Contractor shall perform the following additional services and detailed in Attachment 1 – Additional Scope of Work/Cost Breakdown:
  - Kelley Lake Dam Model Extension
  - Lake Fordyce Dam and Lake Spaulding Dam Nos. 1, 2, and 3 PMF 2-Dimensional Modeling
  - PG&E Additional Data Requests
  - Additional Report Copies
2. The Contract expiration date is hereby extended from December 31, 2017 to December 31, 2018. The Parties specifically agree that this Contract shall be deemed to have been in effect continuously and without interruption since the original effective date of August 24, 2017.

**ATTACHMENTS:** The following are attached to this CWA Change Order and incorporated herein by this reference.

Attachment 1: Additional Scope of Work/Cost Breakdown, including Exhibit 1 – Consultant's Price Breakdown, Pages 1 and 2  
Exhibit 1A: Prime Supplier Subcontracting Plan, Page 4

PRICING CHANGES:	Previous Total CWA Value:	\$ 279,500.00
	Addition:	\$ 40,000.00
	Revised Total CWA Value:	\$ 319,500.00

All other terms and conditions of the CWA, as it may have been amended by previous CWA Change Order(s), if any, shall remain the same.

**THE PARTIES, BY SIGNATURE OF THEIR AUTHORIZED REPRESENTATIVES, HEREBY AGREE TO THE TERMS OF THIS CWA CHANGE ORDER.**

PACIFIC GAS AND ELECTRIC COMPANY		CONTRACTOR: GEI CONSULTANTS, INC.	
Signature	DocuSigned by: 	Signature	DocuSigned by: 
Name	Robin Kirkpatrick	Name	William Rettberg, PE
Title	Supervisor, Elect Trans and Power Gen Sourcing	Title	Senior Vice President
Date	2/26/2018	Date	2/23/2018



## ADMINISTRATION

PG&E Negotiator	Janetta Tarter/Leo Hill	Contractor Representative	William Rettberg, P. E.
Phone	925-328-5285 / 625-459-6909	Phone	510-350-2900
Email:	<a href="mailto:Janetta.Tarter@pge.com">Janetta.Tarter@pge.com</a> / <a href="mailto:Leo.Hill@pge.com">Leo.Hill@pge.com</a>	Email:	wrettberg@geiconsultants.com
Accounting Reference	Order Number 8093568		

## INTERNAL PG&amp;E USE ONLY

Distribution Date		
Distribution of Copies:	<input type="checkbox"/> Document Services (Signed Original Copy) Mail Code N5D 245 MARKET ST., SAN FRANCISCO	<input type="checkbox"/> Contractor (Signed Original Copy)
	<input checked="" type="checkbox"/> Work Supervisor - Andrew Fisher	<input type="checkbox"/> Manager
	<input type="checkbox"/> Invoice Approver	<input type="checkbox"/> Supervisor
	<input type="checkbox"/> V.P.	<input checked="" type="checkbox"/> Sourcing/ Purchasing
	<input type="checkbox"/> Director	<input type="checkbox"/> Law

**ATTACHMENT 1**  
**ADDITIONAL SCOPE OF WORK**

1.0 **GENERAL:** PG&E retained Consultant to perform engineering services to update the dam failure analysis for five projects (seven dams) based on the Federal Energy Regulatory Commission (FERC) comments made on Main Strawberry Dam dated October 30, 2015, and to update the corresponding inundation maps to the 2015 ERM format. The seven (7) dams include: Fordyce, Lake Spaulding Nos. 1, 2, and 3, Kelly Lake, Lower Peak Lake Main and Auxiliary, and Upper Peak Lake Dams.

The following changes to the previous Scope of Work are hereby incorporated into this CWA:

- **Kelly Lake Dam Model Extension** – Consultant reviewed with PG&E the results for Kelly Lake Dam hypothetical failure for the fair weather and flood cases. The model was developed to terminate at the downstream end of the LiDAR survey, consistent with other Drum modeling on reaches with LiDAR survey data. The presence of structures downstream of the LiDAR extent warranted extending the model. Therefore, Consultant shall extend the model to determine the results of a hypothetical failure to incorporate these structures that are downstream of the LiDAR survey in accordance with the direction of the PG&E Work Supervisor.
- **Lake Fordyce Dam and Lake Spaulding Dam Nos. 1, 2, and 3 PMF 2-Dimensional Modeling** – During their model runs, Consultant encountered levee overtopping for the PMF non- failure case. On further evaluation, Consultant learned that the terrain in the flat area of Yuba City would need river channel bathymetry burned into the terrain to keep the levees from overtopping in the non-failure case. Consultant downloaded publicly available channel data and burned the channel into the terrain and shall re-run the PMF models. Therefore, Consultant shall prepare two (2) stand-alone hypothetical dam failure reports for Fordyce Dam and Spaulding Dam Nos. 1, 2, 3 for the PMF case. These reports shall be delivered on or before February 28, 2018.
- **PG&E Additional Data Requests** – Consultant shall submit past reports, GIS files, models, and maps for twenty-six (26) dams to PG&E for uploading in the PG&E library.
- **Additional Report Copies** – Consultant had originally assumed that they would be providing four copies of reports, consistent with past projects. Instead, Consultant shall provide six (6) reports for each dam and two (2) extra map sets for each dam.

2.0 **ADDITIONAL CONSIDERATION:** As full consideration for satisfactory performance of the Work by Contractor, PG&E's total obligation to Contractor is hereby increased to and shall not exceed \$319,500. Work shall be performed on a time and materials basis using the billing rates in the MSA, see Exhibit 1, Consultant's Price Breakdown. This amount is inclusive of all taxes and transportation charges incurred in the performance of the Work. Any change to this amount shall only be authorized in writing by a PG&E CWA Change Order, fully executed by both PG&E and Contractor.

Any costs arising from compliance with federal, state and county rules, regulations and requirements in effect on date of contract shall be borne by Contractor and included in the not-to-exceed amount above.

**Invoicing Requirements:** Contractor's invoices shall:

- Include the CWA number and Order number
- Include all supporting documentation, which shall be attached to each respective Contractor's invoice, including but not limited to timesheets, delivery receipts and such other documentation as is available to support invoiced amounts.

## EXHIBIT 1 – Consultant's Price Breakdown

CWA C1372 Change Order No. 2  
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Sub Tasks	Dam	Labor Estimates						Total Labor				
		Senior Professional Grade 8		Senior Professional Grade 7		Staff Professional Grade 4		Staff Professional Grade 2	Admin Staff			
		Hrs	\$243.95	Hrs	\$217.30	Hrs	\$135.30	Hrs	\$110.70	Hrs	\$91.28	Hrs
1	HEC-RAS Models (5 dams)											\$106,352
	Fordyce	1	\$244	40	\$8,692	80	\$10,824	40	\$4,428	80	161	\$24,188
	Lake Spaulding Dams No. 1, 2, and 3	1	\$244	40	\$8,692	80	\$10,824	40	\$4,428	80	161	\$24,188
	Lower Peak Lake Main	1	\$244	36	\$7,823	80	\$10,824	16	\$1,771	80	133	\$20,662
	Kelly Lake	1	\$244	36	\$7,823	80	\$10,824	16	\$1,771	80	133	\$20,662
	Upper Peak Lake	1	\$244	30	\$6,519	60	\$8,118	16	\$1,771	80	107	\$16,652
2	Inundation Map Updates (5 dams)											\$30,138
	Prepare maps and metadata		\$0	16	\$3,477	24	\$3,247	24	\$2,657	100	\$9,128	164
	QC maps	8	\$1,952	16	\$3,477	16	\$2,165		\$0		\$0	40
	Draft to PG&E for review		\$0	2	\$435		\$0		\$0	12	\$1,095	14
	Final to PG&E	4	\$576	2	\$435		\$0		\$0	12	\$1,095	18
3	Report											\$2,506
	Fordyce	3	\$732	20	\$4,346	20	\$2,706	8	\$886	10	\$913	61
	Lake Spaulding Dams No. 1, 2, and 3	3	\$732	20	\$4,346	20	\$2,706	8	\$886	10	\$913	61
	Lower Peak Lake Main	4	\$976	18	\$3,911	40	\$5,412	12	\$1,328	10	\$913	84
	Kelly Lake	4	\$976	18	\$3,911	40	\$5,412	12	\$1,328	10	\$913	84
	Upper Peak Lake	4	\$976	10	\$2,173	20	\$2,706	8	\$886	10	\$913	52
	Draft to PG&E for review	2	\$488	6	\$1,304	4	\$541	4	\$443	10	\$913	26
	Final to PG&E	1	\$244	6	\$1,304	2	\$271	2	\$221	20	\$1,826	31
	Project Management	2	\$488	10	\$2,173		\$0		\$0		\$0	12
4	Sensitivity Analysis (Change Order No. 1)											\$2,661
	Sensitivity analysis, graphing, and report preparation (sunny day for Kelly Lake, Upper Peak Lake, Fordyce, Spaulding 1, 2, 3	2	\$488	60	\$13,038	200	\$27,060	200	\$22,140	80	\$7,302	542
	EAP Appendix A (Change Order No. 1)											\$70,028
5	Upper Drum: Blue Lake, Rucker Lake, Kidd Lake Auxiliary, Kidd Lake Main, Lower Peak Lake Auxiliary, Lower Peak Lake Main, Fordyce, Lake Spaulding Nos. 1, 2, and 3, Kelly Lake, Lake Valley Auxiliary, Lake Valley Main, Drum Forebay East and West, and Upper Peak											\$9,402
	Lower Drum: Halsey Forebay Nos. 1 and 2, Halsey Afterbay, Rock Creek Main (Auburn), Rock Creek South Wing (Auburn), and Wise Forebay East and West	2	\$488	9	\$1,956		\$0	9	\$996	27	\$2,465	47
	Change Order No. 2											\$5,904
	Kelly Lake Dam Extension	2	\$488	20	\$4,346	48	\$6,494	12	\$1,328	8	\$730	90
	Fordyce and Spaulding No. 1, 2, 3 channel burn, PMF runs, report preparation	2	\$488	16	\$3,477	24	\$3,247	80	\$8,856	29.5	\$2,693	152
	Upload files for 26 dams		\$0	4	\$869		\$0	26	\$2,878	14	\$1,278	44
	Additional report copies (labor)		\$0		\$0		\$0		\$0	20	\$1,826	20
	Additional report copies (expense)		Sub-Totals:	50	\$12,198	440	\$95,612	838	\$113,381	538	\$59,557	397.5
												\$318,031
												\$1,500
												\$319,500

Rates based on Master Service Agreement No. 4400006370 between Consultant and PG&amp;E.

TOTAL RECOMMENDED BUDGET (rounded):





## Contract Work Authorization (CWA) Change Order

This is Change Order ("CO") No. 01 to Contract Work Authorization No. C5455 dated February 16, 2018 issued under and pursuant to the Blanket Agreement or Master Service Agreement No. 4400006370 dated February 8, 2012 (the "MSA") between the below-named Contractor ("Contractor"), a Massachusetts company, and Pacific Gas and Electric Company ("PG&E"), a California corporation with its headquarters located at 77 Beale Street, San Francisco, California 94105. Contractor shall perform all Work under this CWA, as amended by this Change Order, pursuant to and in accordance with the terms and conditions of the MSA.

Contractor's Legal Name: GEI Consultants, In.

This Change Order consists of 2 pages.

Contractor's Address: 180 Grand Avenue, Suite 1410  
Oakland, CA 94612

Project Name: 2018 DSOD Hi Hzd Inundation Map Updates and CAS Breach Analyses

Job Location: Various

### CHANGES: The Parties hereby modify the Contract Work Authorization referenced above as follows:

GEI Consultants to provide the necessary labor for tasks to be performed for failure analysis and report preparation for eight (8) dams and four (4) spillways (CASs), and prepare inundation maps for thirty-three (33) dams and four (4) CASs required for the 2018 DSOD Hi Hazard Dam/Spillway Inundation Mapping Project.

GEI Consultants to proceed with Quarter 2, 3 and 4 work as determined by Project Engineer Andrew Fisher and as stated in the original contract scope of work.

Contractor shall provide PG&E approved subcontractor invoices, if any, to verify all costs associated with this Change Order.

This Change Order No. 1 represents full and final consideration for the changes described herein, including but not limited to all adjustments to price, schedule, guaranteed dates and performance criteria for work that was not included in the original Contract scope of work. All other work descriptions of the original Contract shall remain unchanged and in effect.

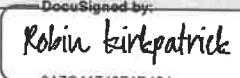
### **ATTACHMENTS: The following are attached to this CWA Change Order and incorporated herein by this reference.**

Attachment No. N/A

PRICING CHANGES:	Previous Total CWA Value:	\$ 205,000.00
	Addition or Deduction:	\$ 667,300.00
	Revised Total CWA Value:	\$ 872,300.00

All other terms and conditions of the CWA, as it may have been amended by previous CWA Change Order(s), if any, shall remain the same.

**THE PARTIES, BY SIGNATURE OF THEIR AUTHORIZED REPRESENTATIVES, HEREBY AGREE TO THE TERMS OF THIS CWA CHANGE ORDER.**

PACIFIC GAS AND ELECTRIC COMPANY		CONTRACTOR: GEI CONSULTANTS	
DocuSigned by:		DocuSigned by:	
Signature	 8A7C41748F1D404...	Signature	 11F0B202EC63401...
Name	Robin Kirkpatrick	Name	
Title	Supervisor, Sourcing Operations	Title	
Date	4/20/2018	Date	4/20/2018